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Color Communications, Inc
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AN 03040043
IN 031600BGU
AD
DR April 16, 2003
S Modification to Line 4
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L 4000 W. Fillmore Street, Chicago 60624

VAR - modification to the existing coating line 4, and addition of small flexographic printers on mounting machines 5A, 6A, 7A and 12A and small UV/Silicon Release coating applicators in mounting machines 6A and 8A

1.0 UNIT SPECIFIC CONDITIONS

1.1 Unit: Coating Lines
Control: Permanent Total Enclosure and Catalytic Oxidizer

1.1.1 Description

The modification to the existing line 4 will consist on a new operational capability, designated as Mode 1, which involves application of lacquer coatings with control by the existing catalytic oxidizer.

Existing line 4 will also continue to be capable of applying latex coating, designated as Mode 2, without its emissions being controlled by the oxidizer, as it was previously operated.

1.1.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
Line 4	Mode 1: Lacquer coatings (Non-compliant coatings)	Permanent Total Enclosure(PTE) and Catalytic Oxidizer
	Mode 2: Latex coating (Compliant coatings)	None

1.1.3 Applicability Provisions and Applicable Regulations

a. An "affected line" for the purpose of these unit-specific conditions, is the coating line described in Conditions 1.1.1 and 1.1.2.

b. The affected line, when operating in Mode 2, shall either comply with the application of compliant coating as established by 35 IAC 218.204(c) for paper coating or with a daily-weighted average VOM content limitations, as allowed by 35 IAC 218.205(a). The affected line, when operating in Mode 1, shall comply with 35 IAC 218.207, which requires that the affected line be equipped with a capture system and a control device that provides at least 81 percent reduction in the overall volatile organic material(VOM) emissions from the affected line and the control device has 90 percent efficiency.

c. The affected line is subject to 35 IAC 212.321(b)(1), which provides that, no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in 35 IAC 212.321(c). [35 IAC 212.321(a)].

1.1.4 Non-Applicability of Regulations of Concern

a. This permit is issued based on this project not being considered a major modification subject to 35 IAC Part 203, Major Stationary Sources Construction and Modification (MSSCAM) because the increase in VOM emissions considering other contemporaneous project, will be less than 25 tons per year (See Attachment 1).

b. The affected line is not subject to 35 IAC Subpart G: Use of Organic Material, pursuant to 35 IAC 218.209, Exemption From General Rule on Use of Organic Material.

1.1.5 Operational Requirements and Work Practices

a. i. The catalytic oxidizer shall be in operation at all times that the affected line is operating in Mode 1(applying non-compliant coating which exceeds the limits established by 35 IAC 218.204(c) and 35 IAC 218.205(a)). The afterburner shall not be seasonally shut down as would be allowed in 35 IAC 218.107 and shall achieve at least 97% control efficiency.

ii. The temperature rise across the catalyst bed of the catalytic oxidizer shall be maintained at a level that is consistent with the temperature rise at which compliance was demonstrated in the most recent compliance test, considering the amount of VOM in the inlet air stream.

b. The permanent total enclosure and afterburner control system shall be operated in a manner consistent to good air pollution control practices and operating requirements established in 35 IAC 218, Appendix B, Procedure T "Criteria for and Verification of a Permanent or Temporary Total Enclosure".

c. The Permittee shall verify the dampers positions, when operating in Mode 1, to allow routing of emissions to the catalytic oxidizer.

d. The Permittee shall, in accordance with manufacturer(s) and/or vendor(s) recommendations, perform periodic maintenance of the catalytic oxidizer such that oxidizer be kept in proper working condition and not cause violation of the Environmental Protection Act or regulations promulgated therein.

e. The Permittee shall replace the catalyst as needed in order to maintain the minimum required VOM destruction efficiency of 90% of the afterburner, pursuant to 35 IAC 218.207(h)(2).

f. This permit does not authorize continued Mode 1 operation of the affected line during malfunction or breakdown of an afterburner because the Permittee did not submit the proof to the Illinois EPA that such continued operation is necessary to prevent injury to persons or severe damage to equipment, or that such continued operation is required to provide essential services, pursuant to 35 IAC 201.262.

1.1.6 Operating and Emission Limitations

a. i. Emissions of the affected line, operating in Mode 1, shall not exceed the following:

Coating Usage		VOM Emissions	
(gal/mo)	(gal/yr)	(T/mo)	(T/yr)
15,000	85,000	0.83	4.7

ii. Emissions of the affected line, operating in Mode 2, shall not exceed the following:

Coating Usage	VOM Emissions

(gal/mo)	(gal/yr)	(T/mo)	(T/yr)
25,000	154,000	4.2	25.5

These limits are based on maximum coating usage, for Mode 1, with control and uncontrolled for Mode 2.

iii. Total VOM emissions from the affected line shall not exceed 30.2 tons/year.

1.1.7 Testing Requirements

a. i. The Permittee shall perform a stack tests on the affected line to confirm the presence of permanent total enclosure when operated with afterburner.

ii. The Procedure T shall be used to determine whether a permanent total enclosures meet the criteria of total enclosure, as described in 35 Ill. Adm. Code, Part 218, Appendix B.

b. Upon request from the Illinois EPA or USEPA the Permittee shall conduct tests in accordance with procedures of 35 IAC 218.105(d),(e) and (f) to measure the overall control and performance of the afterburner controlling all affected coating lines. All such tests shall be made by or under the direction of a person qualified by training and/or experience in the field of air pollution testing.

c. The following methods and procedures shall be used for testing of emissions, unless another method is approved by the Illinois EPA: Refer to 40 CFR 60, Appendix A and 40 CFR 61, Appendix B for USEPA test methods.

Location of Sample Points	USEPA Method 1
Gas Flow and Velocity	USEPA Method 2
Volatile Organic Material	USEPA Method 25/25A

d. This test shall be conducted during circumstances, which are representative of maximum emissions, and equipment data and material usage during the test shall be measured. The Illinois EPA shall be notified prior to these tests to enable the Illinois EPA to observe these tests. Notification for the expected date of testing shall be submitted a minimum of thirty(30) days prior to the expected date. Notification of the actual date and expected time of testing shall be submitted a minimum of five(5) working days prior to the actual date of test. The Illinois EPA may at its discretion accept notifications with

shorter advance notice provided that the Illinois EPA will not accept such notifications if it interferes with the Illinois EPA's ability to observe testing.

e. Copies of the Final Report(s) for these tests shall be submitted to the Illinois EPA within 14 days after the test results are compiled and finalized.

f. The Final Report shall include as a minimum:

i. A summary of results.

ii. General information.

iii. Description of test method (s), including description of sampling points, sampling train, analysis equipment, and test schedule.

iv. Detailed description of test conditions, including:

A. Process information, i.e., mode (s) of operation, process rate, e.g. fuel or raw material consumption;

B. Control equipment information, i.e., equipment condition and operating parameters during testing; and

v. Data and calculations, including copies of all raw data sheets and records of laboratory analyses, sample calculations, and data on equipment calibration.

g. Submittals of information shall be made as follows:

i. Notices of Test - one copy to the Regional Office and one copy to Compliance Section.

ii. Final Report - one copy to the Regional Office and one copy to Compliance Section.

f. Upon request by the Illinois EPA, the Permittee shall perform testing for VOM content of coatings and other VOM containing materials performed as follows [35 IAC 218.105(a), 218.211(a)]:

i. The VOM content of specific coatings and

cleaning solvents used on affected coating lines shall be determined according to USEPA Reference Method 24 of 40 CFR 60 Appendix A and the procedures of 35 IAC 218.105(a) and 218.211(a).

ii. This testing may be performed by the supplier of a material provided that the supplier provides appropriate documentation for such testing to the Permittee and the Permittee's records pursuant to Condition 1.1.9 directly reflect the application of such material and separately account for any additions of solvent.

1.1.8 Monitoring Requirements

Pursuant to 35 IAC 218.105(d)(2)(A)(ii), the catalytic afterburner shall be equipped with a Agency and USEPA approved continuous monitoring device which is installed, calibrated, maintained, and operated according to vendor specifications at all times the afterburner is in use. This monitoring equipment shall monitor the temperature across each catalytic bed or VOM concentration of exhaust.

1.1.9 Recordkeeping Requirements

a. Pursuant to 35 IAC 218.211(e)(2), the Permittee shall collect and record all of the following information each day for the line and maintain the information at the source:

i. Control device monitoring data;

ii. A log of operating time for the capture system, catalytic afterburner, monitoring equipment and the associated coating line; and

iii. A maintenance log for the capture system, catalytic afterburner and monitoring equipment detailing all routine and non-routine maintenance performed including dates and duration of any outages.

b. The Permittee shall maintain records of the following items for the affected line, when operating in Mode 1:

i. Operating log of the affected line operating in Mode 1.

ii. The coating usage(gal/mo and gal/yr).

iii. The VOM content of each coating applied, % by wt.

iv. Density of each coating applied, lb/gal.

v. Cleanup solvent usage (gal/mo and gal/yr) and the density of each solvent applied (lb/gal).

c. The Permittee shall maintain records of the following items for the affected line, when operating in Mode 2:

i. Operating log of the affected line operating in Mode 1.

ii. The coating usage(gal/mo and gal/yr).

iii. The VOM content of each coating applied, % by wt.

iv. Density of each coating applied, lb/gal.

v. Cleanup solvent usage (gal/mo and gal/yr) and the density of each solvent applied (lb/gal).

d. Records of the testing of VOM and HAP content of each coating and cleaning solvent as tested, pursuant to the conditions 1.1.7, which include the following:

i. Identification of material tested;

ii. Results of analysis;

iii. Documentation of analysis methodology; and

iv. Person performing analysis.

e. The VOM emissions in tons/month and tons/year from the affected coating line and calculated based on the compliance procedures from Condition 1.1.12.

1.1.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA of noncompliance with applicable requirements as follows:

a. Pursuant to 35 IAC 218.211(e)(3), the Permittee shall notify the Illinois EPA in the following instances:

i. Any record showing violation of 35 IAC 218.207 and Condition 1.1.3(b) within 30 days of such an occurrence; and

ii. At least 30 calendar days before changing the method of compliance from 35 IAC 218.207 to 35 IAC 218.204 or 205, the Permittee shall comply with all requirements of 35 IAC 218.211(c)(1) and (d)(1).

b. For other noncompliance, including emissions of VOM in excess of the limits specified in Condition 1.1.6, reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

1.1.11 Operational Flexibility/Anticipated Operating Scenarios

None

1.1.12 Compliance Procedures

Compliance of an affected line with the emission limitations established in Condition 1.1.6 shall be based on the recordkeeping requirements in Condition 1.1.9 and the following equation:

a. Mode 1

VOM Emissions from the material usage (coating and clean up solvents) = [Actual Material Usage (gal) x Material Density (lb/gal) x VOM Content (wt. %)] x [(100 - control efficiency, %)/100];

b. Mode 2

VOM Emissions from the material usage (coating and clean up solvents)= Actual Material Usage (gal) x Material Density (lb/gal) x VOM Content (wt. %);

2.0 This permit is issued based on negligible emissions of VOM from the small flexographic printers on mounting machines 5A, 6A, 7A and 12A. For this purpose the combined VOM emissions from the units shall not exceed 0.1 lb/hr and 0.44 tons/year.

3.0 This permit is issued based on no VOM content on the materials used on the mounting machines 6A and 8A, which apply UV/Silicon Release Coatings.

4.0 This permit is issued based on construction of line 2 in Construction Permit 00080079 not been constructed and not been allowed as part of the modification to line 4 addressed in this permit.

5.0 The Permittee is allowed to operate under this construction permit until the next reopening of the CAAPP permit.

Ricardo Ng

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Attachment 1

NSR Applicability

Contemporaneous Time Period of 1999 through 2003 in tons/year

Table I: Emissions Increase Associated with the project

Equipment	Date	Permitted VOM Emissions	VOM Increase
Line 4	2003	4.70	4.70
Others*	2003	0.44	0.44

* Small flexographic printers on mounting machines 5A, 6A, 7A and 12A

Table II: Source-Wide Creditable Contemporaneous Emission Increases

Equipment	Date	Past Actual Average 99-98	Permitted VOM Emissions	VOM Increase
Line 1	2001	5.20	10.00	4.80
Line 3	2001	0.55	4.30	3.75
Line 4	2001	9.72	25.50	15.78

** Line 2 never constructed

Table III: Source-Wide Creditable Contemporaneous Emission Decreases

Equipment	Date	Past Actual Average 99-98	Permitted VOM Emissions	VOM Increase
Line 5 and 6	2001	9.85	3.94*	5.91

* Based on Construction Permit 00080079

Table III : Net Emissions Change	VOM Emissions
Emissions Increases Associated with New Construction	5.14
Source-Wide Creditable Contemporaneous Emissions Increases	24.33
Source-Wide Creditable Contemporaneous Emission Decreases	-5.91
TOTAL	23.56

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